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ABSTRACT

The assessment reported in this paper represents the first attempt by British Columbia to use the Canadian Ministry of Education's assessment program model with special programs; in this case, the French immersion program was chosen. Objectives of the assessment were as follows: (1) examination of the extent to which students are achieving provincial curricular goals in French reading, listening, and speaking; (2) determination of student attitudes toward various aspects of French language and culture and their self-perceptions of their knowledge of French; and (3) comparison of immersion students' achievement in previous provincial assessments of English reading, mathematics, and science with achievement of students enrolled in regular English programs. French reading, speaking, and listening tests and student opinion questionnaires were administered to students in grades 4 and 7. The subjects included 1,508 early immersion fourth graders, 718 early immersion seventh graders, and 616 late immersion seventh graders. Results indicate that both the early and late immersion programs are effective school options for second language learning. Seven tables are presented. (TJH)

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PROVINCIAL ASSESSMENT OF EARLY AND LATE FRENCH IMMERSION PROGRAMS IN BRITISH COLUMBIA, CANADA

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Introduction

In the last ten years, the number of students enrolled in second language immersion programs for majority language students has increased dramatically in North America (Campbell, 1984; Genesee, 1985; Shapson & Day, 1982a; Swain & Lapkin, 1982). In British Columbia enrollments in French immersion have grown from a few hundred students in three school districts in the mid 1970's to nearly 19,000 students in thirty-six districts at the present time. French immersion is a second language program designed for English-speaking children in which all or a major part of the curriculum is taught using French as the language of instruction. The program goals are to develop high levels of French language skills and positive attitudes toward French language and culture and at the same time to foster normal growth in native language (English) skills and age-appropriate levels of achievement in academic subjects. Two program options are currently available in British Columbia: early immersion, which begins in kindergaren and offers all instruction in French through grade 2, 80% instruction in French in grade 3, and from 50% to 70% in grades 4-7; and late immersion, which begins in grade 6 and offers from 80-100% instruction in French in grades 6 and 7.

Because of the rapid and continued growth of immersion education in British Columbia, the Ministry of Education initiated a provincial assessment of French immersion programs to be undertaken in the 1986-87 school year. The assessment was modelled on the Provincial Assessment Program designed for regular English programs in the province which has been conducted in core subject areas (i.e., mathematics, reading, science, and social studies) on a cyclical basis since 1976. The Provincial Assessment Program is designed to provide information on the extent to

which students are achieving the basic objectives of the public education system. The organization and impact of the Program have been described in detail by Mussio and Greer, 1980.

The assessment reported on in this paper represents the first attempt by the province to utilize the Assessment Program model with special programs such as French immersion. The objectives of the assessment were as follows:

1. to examine the extent to which students are achieving provincial curricular goals in French Reading, Listening, and Speaking;
2. to determine student attitudes toward various aspects of French language and culture and their self-perceptions of their knowledge of French; and
3. to compare immersion students' achievement in previous Provincial Assessments of English Reading, Mathematics, and Science with the achievement of students enrolled in regular English programs.

Two major bodies were responsible for the assessment. The Ministry of Education, through the Student Assessment Branch and the Modern Languages Services Branch, coordinated the assessment and convened all committees and panels; and a university-based Contract Team designed the assessment, developed all instruments, and prepared assessment reports. An Advisory Committee, composed of teachers and administrators from across the province, provided guidance and reviewed survey materials. Review Panels, made up of practising teachers, reviewed proposed test items and materials; and Interpretation Panels, a representative committee

of educators and lay persons, determined standards of acceptable and desirable performance and identified areas of strength and weakness as indicated by the assessment results.

Literature Review

Genesee (1984a) has provided a comprehensive description of the defining pedagogical characteristics of immersion, which include the use of the target language for curriculum instruction and emphasis on meaningful and communicative use of the second language, and he has also described its sociocultural conditions, i.e., additive or enrichment bilingualism for a majority language clientele for whom the home language and culture enjoy high status. A considerable amount of research has been conducted on immersion across Canada (see, for example, Shapson & Day, 1982a, 1982b in British Columbia; Genesee, 1978, 1984b and Lambert & Tucker, 1972 in Quebec; Gray, 1986 in New Brunswick; and Swain & Lapkin, 1982 in Ontario). The research results have consistently demonstrated that children reap substantial benefits from the immersion program in terms of their French language development and they experience no harmful effects to their cognitive or English language development or achievement in school subjects. Specifically, early and late immersion children in all grades have shown levels of achievement similar to children in the regular English program in academic subjects such as mathematics and social studies. With respect to native language development, the results for the early immersion program have revealed that in the beginning grades, prior to the introduction of English, children commonly experience initial lags in literacy skills (e.g., reading, spelling, punctuation). However, they quickly overcome these lags and catch up with their English program peers in all aspects of English language arts within one year or two after the introduction of English into

the curriculum. The results for the late immersion program have indicated that late immersion children perform at least as well as their peers in the regular English program in all aspects of English language arts at whatever grade tested.

Investigations of French language development have demonstrated that immersion children attain much higher levels of proficiency in French than children enrolled in more traditional French second language programs in which French is taught as a separate subject. As a further reference point, comparisons with native French-speaking children have revealed that immersion children tend to attain native-like levels in receptive French language skills (reading and listening comprehension) but are less likely to do so in the productive language skills (writing and speaking), where they show many non-native characteristics (e.g., Adiv, 1980; Day & Shapson, 1987; Harley & Swain, 1978; Spilka, 1976).

The early and late immersion programs have both proven to be an effective school option for enabling students to develop high levels of proficiency in French and to maintain at the same time normal academic progress. Studies have also been undertaken, therefore, to compare the levels of French language proficiency attained by the students in the two programs. To date, the results of these studies have been equivocal. In some studies (Cereco, 1983; Pawley & Walsh, 1980) early immersion students were superior to late immersion students in their French language skills, whereas in other studies (Genesee, 1978/79; Genesee & Morcos, 1978; Lapkin & Swain, 1984) early and late immersion students were equivalent in most French language skills. The results of a study comparing early and late immersion students in three school districts in British Columbia (Shapson & Day, 1987) tended to show some of the same variations

that have been found in the comparisons of the two program options conducted elsewhere in Canada. The present assessment, which involves comparisons of students from a greater number of school districts and includes measures of both productive and receptive language skills, provides further information on the comparative progress of early and late immersion students in the province.

While research on immersion has been extensive, it has for the most part involved individual school boards and was conducted during the early years of the growth of the program. The assessement discussed in this paper is one of the few studies that have been conducted involving a larger, and possibly more diverse, student population and using domain-referenced curriculum tests. Because of the growth of immersion education in Canada and in the United States (Genesee, 1985), there is a need for new techniques and methods of assessment for program evaluation, particularly with respect to oral proficiency skills, and further research to shed light on factors which will lead to program development and improvement.

Methodology

Samples

The French Reading Tests (grades 4 and 7) and the French Listening Comprehension Test (grade 7) were administered to the entire population of students enrolled in the grade 4 early and the grade 7 early and late immersion programs in British Columbia (see Table 1). This included 1508 grade 4 early immersion students from 53 schools. The corresponding figures for grade 7 were 718 early and 616 late immersion students from 29 and 20 schools, respectively. The participation rates were quite high (96% for grade 4 and 95% for grade 7).

Table 1
Population for the French Reading (Grades 4 and 7) and the French Listening (Grade 7) Tests[a]

	Grade 4	Grade 7	
	Early	Early	Late
No. Districts	23	16	11
No. Schools	53	29	20
No. Students	1508	718	616

[a] Based on unofficial September 1986 enrollments provided by the Student Assessment Branch.

A sample of approximately one-fifth of the grade 7 students from all but one of the late immersion schools (19/20) and from all but four of the early immersion schools (25/29) was randomly selected for the administration of the French Speaking Test. The total numbers tested for speaking were 156 early and 126 late immersion students. In order to make

comparisons with native speakers of French, the French Speaking Test was administered to 18 Francophone students from one school in Winnipeg, Manitoba; students enrolled in this school were judged to be comparable in socio-economic level to students enrolled in immersion programs.

Measurement Instruments

French Reading Tests. A Table of Specifications for the French Reading Tests was developed by the Contract Team on the basis of the recommendations of the Advisory Committee which had examined and prioritized objectives from provincial curriculum guides for French reading (see Table 2). Reading passages were selected and test items developed by the Contract Team and a team of six practising teachers, and these were reviewed by the Advisory Committee and by Review Panels of teachers.

Following the preparation and piloting of two pilot-test forms for each grade, the Contract Team prepared the final test forms which covered the following five domains: 1. Vocabulary; 2. Literal Comprehension; 3. Inferential Comprehension; 4. Critical Comprehension; and 5. Graphic Materials. A variety of passages including poetry, fictional prose, material from social studies texts, and functional material such as game instructions and posters were included. The reading form for grade 4 contained eight passages and 36 multiple-choice questions, and for grade 7, seven passages and 33 questions. The reliabilities on the total tests were .84 for grade 4 and .78 and .79 for grade 7 early and late immersion, respectively.

Table 2
Table of Specifications for the French Reading Tests

Domain	Recommended Percentage of Questions Grade 4	Grade 7
Vocabulary	25%	15%
Literal Comprehension	30	30
Inferential Comprehension	30	30
Critical Comprehension	5	15
Graphic Materials	10	10

French Speaking Test. The B.C. French Speaking Test: Grade 7 (Day, Shapson, & Rivet, 1987) is a group test of oral proficiency in French previously developed under contract to the B.C. Ministry of Education. The test is composed of three oral tasks based on a town planning activity. The oral tasks are the planning of the town, the composition of a chain story, and an interview. The three oral tasks were developed to elicit speech reflecting a wide variety of language functions as described and classified by Joan Tough (1977), and the test has been designed to preserve as much as possible the essential features of communication (e.g., interactional, purposive, unpredictable) as described by Morrow (1979) in discussing communicative language tests.

The testing begins with a period of introduction in the classroom which serves to acquaint the children with the examiner and stimulate their interest and motivation for participating in the test. Two groups of three children, randomly chosen by the examiner, are then asked to participate in the test activities in a quiet room separate from the classroom. The three students discuss the town plan and then participate in the chain story

activity; individual students are then interviewed. The testing lasts approximately 30 minutes for each group, and the children's voices are recorded.

French Listening Comprehension Test. The French Listening Comprehension Test is a 17-item test designed by the Ontario Institute for Studies in Education, Bilingual Education Project (1978), to measure comprehension of French in communicative situations. It is a tape-administered test consisting of six passages recorded from radio broadcasts, interviews, etc. The student listens to the passages and answers multiple-choice questions after each passage. Administration time for the test is approximately 35 minutes.

Student Opinions Questionnaire. The Student Opinions Questionnaire consists of 15 five-point Likert-type items forming the following four scales: attitudes toward bilingualism (6 items); motivation for learning French (4 items); anxiety about using French (4 items); and perceived understanding of French-Canadian culture (1 item). Most items were taken or adapted from exisiting scales and were used with permission of the authors (Clément, Smythe, & Gardner, 1976). The Student Questionnaire also includes a set of four items asking students to rate on a seven-point scale their ability to speak and understand and read and write French.

The reliabilities for the self-ratings of knowledge of French scale were .80 (early) and .79 (late); for the anxiety and motivation scales they ranged from .57 to .76. The reliabilities for the attitudes toward bilingualism scale were .43 for early immersion and .33 for late immersion, suggesting the need for caution in interpreting the results for this scale.

Administration Procedures

The French Listening and Speaking Tests were administered during the period from late April to mid-May, 1987 by trained Francophone examiners under the supervision of the Contract Team. The French Reading Test booklets, which also contained the Student Questionnaires, were distributed to the schools by the Student Assessment Branch for administration by classroom teachers in mid-May.

Scoring and Analyses

The reading and listening tests were scored, response distributions prepared, and mean percent for each domain calculated. Statistical comparisons (t-tests) were conducted between the performance of early and late immersion students on all measures.

The speaking samples were rated by trained native French-speaking raters on four-point scales which were designed to measure both the linguistic (e.g., pronunciation) and communicative (e.g., quality of discussion) dimensions of speech. The town planning activity was rated on: a) the Quality of Discussion, i.e., complexity and fullness of discussion, development and explanation of ideas, and participation of students; and b) Fluency, i.e., the ease and flow of the students' speech in comparison with native speakers. The story creation activity was rated on Pronunciation, i.e., how well students pronounce French in comparison with native speakers of the language. The interview was rated on the following dimensions: a) Quality of Information, i.e., how well students answer the interview questions; and b) Quality of Description, i.e., how understandable the answers are. Detailed error analyses were also conducted of the children's correctness in the use of verbs in the story and interview tasks and of their

grammar in the town planning task. A summary of the scoring is presented in Table 3.

Table 3
Summary of Scoring for the
B.C. French Speaking Test: Grade 7

	Town Planning	Story	Interview: Part I	Interview: Part II
Rating Scales				
Quality of Discussion	X			
Quality of Information			X	
Quality of Description				X
Fluency	X			
Pronunciation/Intonation		X		
Error Analyses	X	X	X	

The raters conducted the ratings using a Rating Guide which contained written instructions and procedures for conducting the ratings and a set of cassette tapes explaining and illustrating each of the rating scales. Inter-rater reliabilities (Spearman Rank-Order correlation coefficient) for all rating scales were determined on a set of the test tapes which were rated by both raters. Inter-rater reliabilities were generally quite satisfactory, ranging from .94 to .58 on the Quality of Description, Fluency, and Pronunciation/Intonation Scales. The reliability for the Quality of Information scale was low (.11). Subsequent training for the raters seemed to resolve the discrepancies. However, caution is still needed in interpreting the results for this scale.

Interpretation and Reporting

After the data had been analyzed, Interpretation Panels consisting of approximately 15 members at each grade level rated student performance on the five reading domains and on listening comprehension. The Panels, which were composed of teachers, school trustees, district staff, and parents, rated performance on each item and domain as: Strong, Very Satisfactory, Satisfactory, Marginal or Weak. Ratings were based on the expectations of panel members for student performance.

Achievement in English Reading, Mathematics, and Science

The assessment of immersion programs was also designed to investigate the extent to which immersion students were achieving the objectives specified in provincial curriculum guides dealing with English Reading, Mathematics, and Science.

This was done by examining the results for French immersion students on previous assessments of English Reading (Jeroski, 1984), Mathematics (Robitaille & O'Shea, 1985), and Science (Bateson et al., 1986). The performance of French immersion students was compared with that of a comparison group, which was identified with the cooperation of the superintendents of all participating school districts. Superintendents were asked to specify a comparison school in the regular English program for each of their immersion schools, bearing in mind the academic ability and socio-economic background of the students.

Results

French Reading

Grade 4 early immersion. The grade 4 early immersion students' performance ranged from 56% in the Inferential/Critical Comprehension domain to 75% in the Literal Comprehension and Graphic Materials domains (see Table 4). The Panel rated their performance in Vocabulary and Graphic Materials as Satisfactory and in Literal and Inferential/Critical Comprehension as Very Satisfactory. In the Vocabulary domain, students tended to score lower on the items measuring knowledge of familiar words than on those measuring the ability to infer the meaning of words from context. While their performance in Inferential/Critical Comprehension was rated Very Satisfactory, the mean score on this domain was quite low (56%), indicating the need for particular attention to this very important area of French reading.

Grade 7 early immersion. The grade 7 early immersion students' performance was highest (mean percent correct) in Literal Comprehension (see Table 4). Performance in the four other domains ranged rather narrowly from 68% to 74%. The Interpretation Panel rated performance in Inferential Comprehension as Very Satisfactory and in the four other domains as Satisfactory. The rating of Satisfactory is midway on the rating scale of five performance levels, and mean performance in the domain rated as Very Satisfactory is only 72%, indicating that there is ample room for improvement in the early immersion students' French reading skills.

Grade 7 late immersion. The performance of the late immersion students ranged from 58% in Critical Comprehension to 72% in Literal Comprehension (see Table 4). The Interpretation Panel rated performance in

Critical Comprehension and Graphic Materials as Satisfactory and in Vocabulary and Literal and Inferential Comprehension as Very Satisfactory. Students performed highest in Literal Comprehension, showing that they have a solid basis for developing higher levels of reading comprehension skills in French.

Table 4
Performance of Grade 4 Early and Grade 7
Early and Late Immersion Students in French Reading

Domain	Grade 4 Early (n=1451) MPC	PR	Grade 7 Early (n=684) MPC	PR	Grade 7 Late (n=585) MPC	PR
Vocabulary	61%	S	70%	S	61%	VS
Literal Comprehension	75	VS	79	S	72	VS
Inferential Comprehension	56	VS	72	VS	65	VS
Critical Comprehension[1]	--	--	68	S	58	S
Graphic Materials	75	S+	74	S	67	S

MPC=Mean Percent Correct.

PR=Panel Rating: ST-Strong; VS-Very Satisfactory; S-Satisfactory; M-Marginal; W-Weak.

[1] Because there were few questions within the grade 4 Critical Comprehension domain, these questions were combined with the Inferential Comprehension questions.

French Listening Comprehension

The mean performance of the early immersion students in French listening comprehension was 70%; this performance was rated as Satisfactory to Very Satisfactory by the Interpretation Panel. The mean performance of the late immersion students in French listening

comprehension was 55%. This was rated as Very Satisfactory by the Panel.

French Speaking

Table 5 presents the provincial results on the rating scales of the French Speaking Test and compares these with the results for the native French-speaking students who were tested as part of this study. The results for the more communicative measures (i.e., Quality of Discussion, Quality of Information, and Quality of Description) are first discussed, followed by those for the Fluency and Pronunciation/Intonation measures.

Table 5
Results of Ratings on the French Speaking Test

Scale	Early Immersion			Late Immersion			Francophone			
	n[a]	Mean Rating (max=4)	S.D.	n[a]	Mean Rating (max=4)	S.D.	n[a]	Mean Rating (max=4)	S.D.	F-ratio[b]
Quality of Discussion	50	2.6	.68	39	2.4	.59	6	2.8	.75	-
Quality of Information	147	2.5	.63	117	2.4	.63	18	2.5	.51	1.0[n.s.]
Quality of Description	146	2.4	.69	114	2.2	.82	17	2.5	.62	3.2[n.s.]
Fluency	150	2.8	.40	113	2.6	.52	18	3.9	.24	77.5***
Pronunciation/Intonation	144	2.8	.40	120	2.1	.53	18	4.0	.00	182.7***

S.D. = Standard Deviation
n.s. = Not significant.
*** = Significant at the .001 level.

[a]The numbers for the Quality of Discussion scale represent the number of groups rated. The numbers for all other scales represent the number of students rated.

[b]Based on one-way analysis of variance comparing Francophone vs. early vs. late immersion. This analysis was not conducted on the Quality of Discussion scale because there were too few testing groups (i.e., 6 groups) in the Francophone sample for reliable comparisons to be made. Post-hoc comparisons of the significant results for Fluency and Pronunciation/Intonation further revealed that the Francophone students scored higher than both immersion groups and early immersion scored higher than late immersion on the two scales.

Quality of discussion (Town planning). The quality of discussion scale measured the complexity and fullness of the discussion and the development and expression of ideas, the interaction among the children, and their overall control of language. The mean ratings were 2.6 and 2.4 (max=4) for the early and late immersion students, respectively, and 2.8 for the native French-speaking students (see Table 5).

Quality of information (interview). In the first part of the interview, the students were rated for the quality of information in their responses to the interview questions asking them who they would be and what they would do if they lived in the town and why. The mean ratings were quite similar for all groups; they were 2.4 (max=4) for the late immersion students and 2.5 for the early immersion and Francophone students (see Table 5). There were no significant differences between the performance of the Francophone students and those of the early and late immersion students on this measure.

Quality of description (interview). In the second part of the interview, the students were rated for the quality of their description of the job or occupation they had chosen in Part One. The grade 7 early immersion students received a mean rating of 2.4 (max=4) and the late immersion students, a mean rating of 2.2 on this scale. The Francophone students received a mean rating of 2.5; no significant differences were found between their performance and those of the early and late immersion students on this measure.

Fluency (Town planning). The grade 7 early immersion students received a mean rating of 2.8 (max=4) and the late immersion students received a mean rating of 2.6 on the Fluency scale, which measured the ease and flow of the students' speech in comparison with native speakers. The

Francophone students received a mean rating of 3.9 in Fluency and performed at a significantly higher level than both the early and late immersion students on this measure.

Pronunciation/Intonation (Story). The early immersion students received a mean rating of 2.8 (max=4) and the late immersion students received a mean rating of 2.1 on the Pronunciation/Intonation Scale, which measured how well students pronounce French in comparison with native speakers. The Francophone students received a mean rating of 4.0 and performed at a significantly higher level than both the early and late immersion students.

Error Analyses

Quantitative analyses of the children's grammar in the town planning, story, and interview tasks were conducted in order to provide more detailed information on the strengths and weaknesses of the immersion children in oral grammar than could have been provided by the global ratings. The error analysis for the story focused on the auxiliary être where required in the passé composé, while that for the interview focused on the conditional and the idiomatic verb, avoir...ans. These analyses included all the early and late immersion children (150 and 120, respectively) and all the Francophone children (18) tested for speaking. The error-analyses for the town planning task focussed on major grammatical classes (e.g., articles, verbs, adjectives). These analyses included a random sub-sample of approximately one-third of the early and late immersion students tested for speaking (34%, 51/150 and 33%, 39/120, respectively).

A classification schema was established based on the major grammatical classes and sub-classes illustrated in Figure 1. Major error types in each sub-class were then determined, and the frequency of error

tabulated. The results for the grade 7 early immersion children were visually compared, where possible, with the results of a study of grade 3 immersion children in British Columbia (Day & Shapson, 1987). The results are not directly comparable because of the differences in the instruments used but the comparisons are suggestive of the changes that may occur in oral grammar from grades 3 to 7.

The results for the native French-speaking students on the three areas formally analyzed indicated a somewhat high error rate for the idiomatic verb, avoir...ans (35%), but a low error rate for the use of être with required verbs in the passé composé (13%) and the use of the conditional in the interview (15%). In all other areas, visual examination of the data suggested that the frequency of grammatical errors was quite low in the speech of the native French-speaking children.

The results for the early and late immersion students indicated that they made frequent errors (50%) in the following areas of grammar: a) reflexive pronouns; b) present plural verbs; c) subjunctive; and d) idiomatic verb, avoir...ans. The early immersion students also made frequent errors (50% and over) in feminine adjective agreement. The error rate for the late immersion students was just under 50% in this area. The late immersion students also had a high error rate (77%) for the use of the conditional in the interview.

Both the early and the late immersion students made many errors in the following aspects of grammar (range 21%-49%): a) feminine definite and indefinite articles; b) masculine adjective agreement; and c) use of être where required in the passé composé.

The early immersion students only sometimes (range 11%-20%) made errors in the following areas: a) irregular plural of nouns;

b) elision; c) contraction; and d) masculine indefinite articles. They very seldom (10% or less) made errors with masculine definite articles. Like their early immersion counterparts, the late immersion students also only sometimes (range 11%-20%) made errors in elision, contraction, and masculine indefinite articles. However, they made considerably more errors in the use of the conditional in the interview (77% vs. 41%); and they made slightly more errors with the irregular plural of nouns (22% vs. 15%) and the masculine definite articles (16% vs. 6%).

Examinations of the error rates for the grade 7 early immersion children and those for the grade 3 early immersion children previously tested (Day & Shapson, 1987) revealed that the error rates were similar for reflexive pronouns (56% vs. 60%). They were lower in grade 7 than in grade 3 in the following areas of oral grammar: a) contractions (18% vs. 37%) and b) the use of the auxiliary être where required in the passé composé (44% vs. 80%). These results suggest that some progress has been made from grade 3 to grade 7 in some aspects of the children's acquisition of French grammar.

In addition to the lower rates in the above areas, the error rate for the masculine indefinite article was lower in grade 7 than it was in grade 3 (11% vs. 30%). Although this lower error rate may appear encouraging, one might also view this as a negative finding in that it suggests that the students may be overgeneralizing the masculine to a greater extent in grade 7 than in grade 3.

The error rates for grade 7 early immersion were higher than those for grade 3 for both masculine (41% vs. 7%) and feminine (57% vs. 30%) adjective agreement. Although these higher error rates may be disappointing, this might be viewed as a positive finding in that it points to

less overgeneralization and more experimentation with adjective agreement in grade 7 than in grade 3.

Figure 1
Error Classification Schema

Class and Sub-class	Type of Error	Example of Error
Nouns		
Irregular Plurals	Incorrect form	les hôpitals; les animals
Pronouns		
Reflexive	Omission	Il a besoin de coucher.
Articles		
Definite (le/la)	Elision	le hôpital
	Contraction	près de le parc; à le zoo
	Gender	la parc; le ville
Indefinite (un/une)	Gender	une parc; un ville
Adjectives	Agreement	tous les choses
Verbs		
Present	3rd person plural	Les personnes va.
Passé Composé	Failure to use être with reflexive and other verbs requiring être	Il a sorti; ils ont revenus.
Conditional	Not used in required contexts	Je suis 29 et je travaille à l'école et je vivrais dans un bel appartement.
Subjunctive	Not used in required contexts	Je veux qu'il vit en paix.
Idiomative verb (avoir. . . ans)	Use of être instead of avoir	Je suis vingt ans.

Student Questionnaire

The attitudes of the grade 7 early and late immersion students (see Table 6) were quite positive; the mean ratings were at about the mid-point or lower on all scales (based on a five-point scale, with 1 as the positive end and 5 as the negative end). Students were most positive in their attitudes toward bilingualism and motivation for learning French (mean ratings of 2.0 and lower). They also displayed low anxiety in using French both in and out of class and rated their understanding of French-Canadian culture quite positively (mean ratings of 2.7 and lower).

The results for the students' self-ratings of their knowledge of French (see Table 6) indicate that the grade 7 early and late immersion students rated their ability to speak and understand and to read and write French quite highly. The mean ratings for the early immersion students ranged from 5.0 for reading French to 6.0 for understanding French (based on a seven-point scale where 5=fairly well and 7=fluently), while those for the late immersion students ranged from 4.7 for reading French to 5.4 for understanding French. Both groups of students tended to rate their aural/oral communication skills (i.e., understanding and speaking) in French slightly higher than their literacy skills (i.e., reading and writing).

Table 6
Early vs. Late: Results of Comparisons on the
Student Opinions Questionnaire

	Early Immersion n	Early Immersion Mean Rating	Late Immersion n	Late Immersion Mean Rating	t-value
Student Opinions[a]					
Attitudes toward bilingualism (6 items)	673	1.9	582	1.9	0.5 n.s.
Motivation for learning French (4 items)	660	2.0	582	1.8	5.0***
Anxiety in using French (4 items)	677	2.4	584	2.5	3.6***
Perceived understanding of French-Canadian culture (1 item)	679	2.4	585	2.7	5.4***
Self-Ratings of Knowledge of French[b]					
Speak	675	5.8	579	5.2	14.3***
Understand	677	6.0	583	5.4	14.2***
Read	675	5.0	583	4.7	5.0***
Write	676	5.2	583	4.9	5.0***

n.s. = Not Significant
***= Significant at the .001 level.

[a]Based on the following five-point scale: 1 = strongly agree; 2 = agree; 3 = undecided or don't know; 4 = disagree; 5 = strongly disagree. A lower mean rating indicates more positive findings.

[b]Based on the following seven-point scale: 1 = not at all; 3 = a little; 5 = fairly well; 7 = fluently.

Comparisons between Early and Late Immersion Students

French language measures. The early immersion students performed at significantly higher levels than their late immersion counterparts in all five domains and on the total test score of the French Reading Test (see Table 7). The early immersion mean score of 73% on the total test was eight percentage points higher than the late immersion mean score of 65%; the difference in domain scores ranged from seven to ten percentage points. The early immersion students also peformed at a significantly higher level than their late immersion counterparts on the French Listening Comprehension Test. The early immersion mean score of 70% was fifteen percentage points higher than the late immersion mean score of 55%.

Table 7
Early vs. Late: Results of Comparisons in French Reading and Listening Comprehension

	Early Immersion		Late Immersion		
	n	Mean Percent Correct	n	Mean Percent Correct	t-value
Reading Comprehension					
Vocabulary	684	70%	585	61%	7.4***
Literal Comprehension	684	79	585	72	6.2***
Inferential Comprehension	684	72	585	65	6.4***
Critical Comprehension	684	68	585	58	7.6***
Graphic Materials	684	74	585	67	5.6***
Total	684	73	585	65	9.1***
Listening Comprehension	665	70%	548	55%	15.0***

***Significant at the .001 level.

The results of the statistical comparisons in French Speaking (see Table 5) revealed no significant differences on the Quality of Discussion, Quality of Information, and Quality of Description scales, but significant differences in favor of the early immersion students on the Fluency and Pronunciation/Intonation scales. A higher percentage of early immersion students than of late (81% vs. 57%) received a rating of 3 in Fluency, indicating relatively smooth and effortless speech. A far higher percentage of early immersion students than of late also received a rating of 3 in Pronunciation/Intonation (83% vs. 19%), indicating that they had good pronunciation and intonation and spoke French with a light or rather light accent.

Student Questionnaire. The results of the statistical comparisons on the Student Questionnaire (see Table 6) revealed that the late immersion students were significantly more positive than their early immersion counterparts in their motivation toward learning French. The early immersion students were significantly more positive than the late immersion students in their perceived understanding of French-Canadian culture; they had somewhat less anxiety in using French; and they rated their ability in all four language skills in French (i.e., speaking, understanding, reading, and writing) more highly than did the late immersion students. Although the difference on all of these measures was small, the findings are consistent with the findings of previous research (Lapkin & Swain, 1984; Shapson & Day, 1987), in which early immersion students have tended to show more self-confidence in using French and to give higher ratings to their linguistic skills in French than late immersion students.

Achievement in English Reading, Mathematics, and Science

The results of the study designed to investigate immersion students' achievement in previous provincial assessments of English reading, mathematics, and science are summarized below.

Comparison Sample. English program students from the comparison schools identified by superintendents performed better than the average for all districts with immersion programs. This was true in both grades 4 and 7 for all objectives in each subject area. Such consistency provides strong evidence for the validity of the comparison sample, at least in the sense that superintendents chose better-than-average classes to match the French immersion classes.

French immersion students. Grade 4 students in French immersion programs outperformed the students in the comparison sample on virtually all objectives in each subject area. Grade 7 early immersion students outperformed the comparison group on all objectives in the three assessments, while grade 7 late immersion students were superior to the comparison group on all but three objectives: two in Mathematics and one in Science.

Conclusions and Discussion

The major goals of French immersion programs are to enable majority language children to attain high levels of proficiency in their second language (French) and at the same time to attain age-approximate levels of achievement in academic subjects and normal progress in their native language (English) skills. The results of this assessment indicate that immersion programs in British Columbia are achieving these goals. The performance of French immersion students on domain-referenced curriculum tests of **English reading, mathematics, and science** was higher than the average performance of the population of students from districts with immersion programs. Furthermore, French immersion students performed better than students in samples specifically chosen to control for general academic and socio-economic background differences.

There are several factors, or combinations of factors, that may account for the consistently high achievement of French immersion students, such as: parental support and encouragement for their children's education; ability and motivational levels of French immersion students; and programmatic effects or instructional practices within the immersion program itself. Regardless of the underlying reasons for differences in achievement, it is clear from the results that immersion students are achieving at least as well as, if not better than, regular English program students on provincial objectives in English Reading, Mathematics, and Science. In a discussion of French immersion programs in Ontario, Olson and Burns (1983) have revealed a tendency for immersion programs to be elitist in their student population. In order to avoid this tendency, it will be important to conduct further research on the ability and background characteristics of the poulation of students opting for and remaining in

immersion programs to ensure that immersion is accessible to and is genuinely serving a broadly based student population. Such research is particularly important in view of research showing that immersion programs, particularly early immersion, are suitable for students from a wide range of ability and socio-economic backgrounds (Genesee, 1984, 1985).

Overall, the results indicate that immersion students have made good progress in **French reading**, with the mean scores for most domains falling in the 60% to 75% range and all Interpretation Panel ratings being Satisfactory or higher. While the findings showed that students performed reasonably well in the context of current expectations, they also suggested that there is ample room for growth in all areas of French reading. It is recommended that greater emphasis be placed on developing students' higher level reading comprehension skills and that opportunities be provided for extended and more varied reading experiences in French. Recent research on first language reading (e.g., see Anderson et al., 1985; Pearson, 1985) suggesting the effectiveness of direct instruction in comprehension strategies needs to be investigated for its applicability to the immersion situation. In addition, research on vocabulary instruction needs to be explored to find alternative and more comprehensive approaches to vocabulary teaching than word lists and conventional definition approaches, which have proved ineffective in the past (e.g., Pearson, 1984; Richards, 1985).

Overall, grade 7 immersion students performed well in **French speaking**. They were able to engage in fairly complex discussions and did so with ease and enjoyment. The immersion students were comparable to a group of native French-speaking students in Manitoba on the more

communicative measures (e.g., Quality of Discussion, Quality of Description) but not in their fluency, pronunciation/intonation or oral grammar. This pattern of results is consistent with the results of previous research on the speaking skills of immersion students in British Columbia and elsewhere in Canada (e.g., Day & Shapson, 1987; Lapkin, 1984).

The results of the error analyses of oral grammar revealed that early and late immersion students have error rates of over 20% in most areas analysed. Some progress seems to have been made from grade 3 to grade 7 in certain aspects of French grammar, i.e., in contractions and the use of the auxiliary être where required in the passé composé, but little progress seems to have been made in other areas. The kinds of errors made by the immersion students in British Columbia have been noted in many Canadian research studies (e.g., Adiv, 1980; Harley & Swain, 1984) and suggest that improvement is needed in the children's oral grammar.

In the past, the performance of native French-speaking students has served as an important benchmark for evaluating the oral language skills of immersion students. This has caused the linguistic differences between immersion and native French-speaking students to be overemphasized and the actual performance levels of immersion students on both linguistic and communicative measures to be neglected. Many students in the assessment performed well, but many performed only adequately on both the linguistic and communicative measures. Given research showing little relationship between general academic abilities and oral language skills (e.g., Carey & Cummins, 1984; Genesee, 1976), it should not be an unrealistic aim for immersion programs to enable all students to speak clearly, effectively, and reasonably correctly in French. Consistent with current theories on language learning and teaching (Allen, 1983; Harley & Swain, 1984),

extensive opportunities need to be provided for students to use French for a broad range of functions in meaningful situations and curricular strategies which combine formal and functional approaches to language teaching, also which integrate the teaching of grammar and other aspects of oral language with other skill and subject areas, need to be developed so that the teaching of grammar is not divorced from meaning and use. Since recent research suggests that immersion students may not be receiving consistent and clear feedback on the errors they make (Swain & Carroll, 1987), attention also needs to be given to developing clear objectives and specific strategies for teachers to remedy errors.

Overall, the results of this assessment indicate that both the early and the late immersion programs are effective school options for second language learning. The students have achieved high levels of proficiency in their second language at no cost to their progress in their native language (English) or other school subjects. They display positive attitudes toward bilingualism, have high motivation for learning French, and rate their understanding of French-Canadian culture quite positively. They also feel comfortable using French both in and out of class and give high self-ratings to their ability to speak, understand, read and write French and they have positive attitudes toward French language and culture. However, because of the relative newness of immersion programs, it is suggested that further research be directed towards immersion curriculum development, instructional strategies and classroom practices, and the relationship between achievement in French and English language skills.

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